Perceived Competence, Autonomy, and Relatedness as Predictors Of Academic Burnout in Undergraduate Students

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Predictors of Academic Burnout in Undergraduate Students

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Burnout is one of the most pervasive threats to students' psychological and physical well-being. The present study was conducted to examine the relationships among academic burnout in college students and self-perceived levels of autonomy, competence, and relatedness. The researcher postulated that scores of perceived competence, autonomy, and relatedness would be negatively correlated with levels of academic burnout. One hundred thirty participants—57 men and 73 women—were recruited from the Lindenwood Participant Pool. In order to collect data, participants were given a packet of surveys. The three surveys were a demographic questionnaire, the Basic Psychological Needs Survey (accessed from www.selfdeterminationtheory.org), and the Maslach Burnout Inventory – Student Survey (accessed from www.mindgarden.com). Results suggest competence and autonomy may predict levels of academic burnout, while relatedness bears a no association. This study offers a base on which future research designs can be constructed to examine burnout among Lindenwood University students from a student-context perspective. Because of its serious implications, burnout is a very important subject to study.

Keywords: burnout, undergraduate students, self-determination theory

Today's undergraduate students face many unique and demanding challenges as they strive to do what is required of them. Of great concern is the issue of burnout and difficulties maintaining optimal senses of autonomy, relatedness, and competence. Burnout negatively affects the learning and performance of students, as well as their physical and psychological health (Kao, 2009). Furthermore, burnout has been shown to be related to absenteeism, lower efficiency, social conflict, and the use of drugs and alcohol in the workplace (Cherniss, 1992;

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Gagn'e, 2003; Kahill, 1988; Maslach & Jackson, 1981). It is not a stretch to assume that undergraduate students could face the same consequences. These results alone make the study of the relationship between competence, autonomy, relatedness, and academic burnout especially important because of the potentially serious implications for students at Lindenwood.

The present study was conducted in order to find a relationship between levels of competence, autonomy, and relatedness to academic burnout. Results would offer a base for which future researchers can begin to explore burnout among college students from a person-context perspective. As more understanding of predictors of burnout is gained, greater prevention strategies can be created to address the issue.

Ever since the idea of burnout emerged, it has been the focus of a substantial body of research (Jacobs & Dodd, 2003). Such research is commonly focused on burnout in work settings—specifically on those who do "people-work," such as social workers (Maslach & Jackson, 1981; Cohen, 2003) and hospital nurses (Amoo & Fatoye, 2008; Robinson-Kurpius & Keim, 1994). However, very little research has been done in the university setting (Kao, 2009; Weckwerth & Flynn, 2006). Pisarik (2009) highlighted the need for future research on academic burnout in college students because, as he noted, burnout is a serious issue that afflicts many more students than people realize.

Burnout refers to three basic characteristics: physical and emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981). All three factors do not typically manifest at the same time (one usually results from another) (Maslach, 1982). For example, elements of depersonalization might be a result of emotional exhaustion.

The characteristic, "emotional and physical exhaustion," refers to a state in which a person is depleted of physical and mental resources (Maslach & Jackson, 1981). Maslach (1982)

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describes this as resulting from chronic senses or strain in one's workplace. It is usually the feeling of emotional and physical exhaustion that causes the other two components of burnout (Maslach, 1982).

Next, depersonalization is defined as a negative, cynical attitude toward one's occupation or those one works with (Maslach & Jackson, 1981). The cynical attitude is usually aimed at one's superiors (Kroon, Voorde, & Veldhoven, 2009), and is often a result of physical and emotional exhaustion (Maslach, Schaufeli, & Leiter, 2001). In the context of the present study, "superiors" would relate to students' professors.

Finally, reduced personal accomplishment refers to an inclination to negatively appraise one's production or accomplishments at work (Maslach & Jackson, 1981). This sense of reduced personal accomplishment in college students is often a result of too large of a workload and lack of resources to effectively meet one's requirements (Jacobs & Dodd, 2003).

Burnout is typically characterized by a sense of indifference and detachment from one's environment (Maslach, 1982), and normally arises when an individual perceives an imbalance between the strains of their work position and the amount and quality of resources at their disposal (Maslach, 1982). Researchers (e.g. Amoo & Fatoye, 2008; Maslach, 1982; Weckwerth & Flynn, 2006) have found that burnout most commonly comes about if this self-perceived imbalance lasts for a long period of time.

Self-determination theory (SDT), as proposed by Deci and Ryan (1985), posits human beings have innate propensities to develop senses of self that are unique and constantly evolving. People have tendencies to establish relationships among the different facets of their own personalities as well with individual groups (Baard, Deci & Ryan, 2004). Moreover, Deci and Ryan (1985) state that social environments (such as a university environment in the present

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study) can facilitate or hinder these human tendencies, which can affect a person's psychological and physical well-being. Deci and Ryan (1985) hypothesized that individuals have three primary psychological needs: competence, autonomy, and relatedness.

The first basic human need is competence. Competence refers to the feeling of effectiveness when dealing with challenges experienced in one's environment (Ryan & Deci, 2000). Gagn'e (2003) reported that lower levels of competence are associated with feelings of disinterest and lethargy in the work setting. This suggests a relationship between burnout and competence, since such feelings are seen in individuals struggling with burnout.

Relatedness is the next basic human need. The term "relatedness" refers to the social relationships people form with those in their environments (Deci & Ryan, 2000). Relatedness was chosen to be studied because Kahill (1986) found that greater social support has been shown to be related to lower levels burnout (Kahill, 1986). Hill (2004) suggested that those who score low on relatedness often feel very isolated. Jacobs and Dodd (2003) found a relatively high percentage of people suffering from burnout report feeling isolated, which indicates a link between relatedness and burnout. Burnout often occurs due to lack of social and emotional support from one's superiors in a professional work setting (Hill, 2004), more so than from one's peers (Hill, 2004). The aforementioned research, although not conducted on students, suggests that there might be a relationship between burnout and relatedness in a university setting. The researcher found that little work has been done to examine the effect of relatedness on burnout between students' and their professors, and, especially, between students and their peers in an academic setting.

The final basic human need is the need for autonomy. Research has found that promotion of student autonomy has shown to lead to greater engagement and positive feelings about an

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activity (Deci, Eghari, Leone, & Patrick, 1994). This greater engagement and positive feelings typically leads to greater competence and increased personal accomplishment (Deci, Eghari, Leone, & Patrick, 1994). As previously noted by Maslach and Jackson (1981), a key feature of burnout is reduced personal accomplishment. From this research, it can be extrapolated that autonomy is another key feature in predicting academic burnout.

The primary purpose of the present study was to examine whether or not the elements of SDT were correlated to levels of academic burnout. The researcher chose to study academic burnout because research in the field of academic burnout in college students is limited. The topic of the relationship between the components of SDT and academic burnout is especially important because the consequences of academic burnout have potentially serious implications for students at Lindenwood (such as the deterioration of physical and mental health). Thus, it is important to work to more fully understand burnout among the general college student population, and to apply effective interventions to reduce burnout.

Other issues investigated were the differences in levels of burnout, relatedness, competence, and autonomy in regards to a participants' sex, age, year at Lindenwood University (i.e. freshman, sophomore, junior, senior), involvement in varsity or junior varsity athletics, and involvement in Lindenwood's Work & Learn program.

Differences in class rank were studied because Nowack and Pentowski (1994) found that freshmen students are under more stress compared to upperclassmen. Since stress is directly related to burnout (Hill, 2004), it is important to see if the implications of burnout are unique to freshmen. Also, involvement in varsity or junior varsity athletics needs to be discussed. Frank (2008) researched burnout in college athletes, and came to the conclusion that they suffered from burnout more than non-athletes. It is important to study burnout in athletes because it might

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affect their academic and athletic performance. Involvement in Lindenwood's Work & Learn

program will also be studied. Additionally, Jacobs & Dodd (2003) suggest that burnout is often

related to too heavy of a workload. The influence of workload is worth studying to find out if

participating in the Work & Learn program is detrimental to students' academic success.

The researcher hypothesized that scores of perceived competence, autonomy, and

relatedness would be negatively correlated with burnout in college students. The Basic

Psychological Needs Survey was used to assess levels of competence, autonomy and burnout.

The Maslach Burnout Inventory – Student Survey was used to assess levels of burnout in

students.

It was also hypothesized that various demographic variables (e.g. sex, age, year at

Lindenwood, involvement in Work & Learn etc.) would be correlated to burnout. A

demographic questionnaire was created in order to properly assess these variables.

Method

Participants

Research for the present study was conducted on the main campus of Lindenwood

University. Participants were gathered from the Lindenwood Participant Pool (LPP). The LPP

is designed to allow researchers to access participants for research studies. A total of 130

undergraduate participants were recruited for the study. Participants were given compensation in

the form of extra credit points toward their respective general education classes (e.g. PSY 100,

SOC 102, and ANT 112). All participants in the study were 18 years of age or older.

Of the 130 students, 57 were males and 73 were females. Thirty-eight of the participants

were freshmen, 37 were sophomores, 31 were juniors, and 24 were seniors. The average age was

20.44 years, with a minimum age of 18 and a maximum age of 44 (SD = 3.68).   Ninety-three

participants were white, 8 were black, 7 were Hispanic, 11 were Asian/Pacific Islanders, and 4 were more than one ethnicity and 7 marked "other." Forty-nine participants played Lindenwood University varsity or junior varsity sports. Sixty-five had Lindenwood University Work & Learn assignments.

Materials

Research was conducted within the Psychology Lab at Lindenwood University. Materials used during the assessment were student desks and chairs. Pens, surveys, receipts, and other forms were provided by the researcher. Participants signed up to take part in the research study on a signup sheet placed on the LPP signup board. Signup sheet B was used to select specific times for participants to sign up. The signup sheet included the research description for the study (see Appendix A). Two informed consent forms (see Appendix B) were used per participant (one for the researcher to keep and one for the participant to keep as a personal record) to explain the basics of the study.

The Basic Psychological Needs Survey (BPNS) (www.selfdeterminationtheory.org) (see Appendix C) was used to record participants' levels of competence, autonomy, and relatedness. The researcher was allowed to use to questionnaire without charge as long as results were shared at the end of the study. With approval from administrators from the www.selfdetermination theory.org website (operated by professors at Rochester University), the researcher changed questions on the BPNS to be more relevant to a university setting (e.g. the question "I do not feel capable of doing work at my job" was altered to "I do not feel capable of doing my homework." The BPNS consisted of 21 questions using a 1 – 7 Likert Scale (a score of 1 indicating "not true at all" and a score of 7 indicating "very true"). It included questions such as: "When I work with my peers in a group, I feel like I can influence how school work gets done," and "I like working

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with my peers in school." Scores were analyzed using a guide provided by

www.selfdeterminationtheroy.com.

The Maslach Burnout Inventory - Student Survey (www.mindgarden.com) (see Appendix

D) was used to assess levels of student burnout. The survey used a 0 – 7 Likert Scale (a score of

0 indicating "never" and a score of 7 indicating "always"). It included questions such as: "I feel

emotionally drained by my studies," "I have become less interested in my education since my

enrollment in school," and "I feel stimulated to achieve my goals." A testing manual purchased

from www.mindgarden.com helped the researcher interpret scores.

The demographic questionnaire (see Appendix E) was used to record participants'

personal information (i.e. sex, ethnicity, year at Lindenwood University, age, involvement in

university athletics, and involvement in the university's Work & Learn program). Finally, a

feedback letter (see Appendix F) was used to explain the importance of the study, its purpose, all

hypotheses, and what will happen with information gathered.

Procedure

Participants were given surveys in groups of 2-5. They were given ample space so there

would be no pressure while completing the surveys. Participants were asked to carefully read

two informed consent forms and sign them if they agreed to participate. (If students did not

agree to participate in the study, they were still given bonus points for their respective classes.)

If the participants did agree, one form was kept by the researcher to record participation and the

other was left to the participant. Participants were then given the Basic Psychological Needs

Survey so the researcher could assess their levels of competence, autonomy, and relatedness.

After the first survey, participants were given the Maslach Burnout Inventory - Student Survey to

assess levels of burnout. Next, students were asked to fill out demographic questionnaires. Once

participants had filled out the questionnaires, they were given a feedback letter highlighting the importance of the study, the hypotheses, and what will happen with the results. After the feedback letter was given, the researcher made sure all parts of participants' bonus point receipts were filled out. The researcher then informed participants to take their receipts to the LPP office to receive bonus points, and were then told that they were free to leave the testing area. After data was collected, the researcher scored the surveys and recorded them onto a Microsoft Excel spreadsheet. Statistical analyses were conducted using SPSS software. On the Basic Psychological Needs Survey, scores for autonomy were gathered by adding the relevant scores and averaging them; six scores for competence were added together and divided by six; seven scores for autonomy were added together and divided by seven; eight scores for relatedness were added together and divided by eight. The 13 scores for the Maslach Burnout Inventory – Student Survey were averaged to get an overall score for academic burnout. Individual data from the demographic questionnaire was recorded onto the spreadsheet as well. From this process the researcher was able to gain a score for autonomy, relatedness, competence, and burnout from each participant.

Results

Primary analyses were focused on the relationship between the elements of Self-Determination Theory and academic burnout. The researcher hypothesized that scores of perceived competence, autonomy, and relatedness would be negatively correlated with burnout in college students. Different demographic variables were also analyzed and considered.

The current sample reported a moderate level of burnout ($M = 3.12$, $SD = 0.65$). (As will be later discussed, this result was expected given the time of year research was conducted.) Overall norms for the sample collected suggest moderate scores in autonomy ($M = 4.3$, $SD =$

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0.70), moderate scores for competence (M= 4.8, SD = 0.71), and moderate scores for relatedness (M = 5.02, SD = 0.81).

The primary hypotheses stated that elements of SDT will be correlated academic burnout. However, a multiple regression analysis indicated that only competence and autonomy had an impact on burnout (adjusted R ^{2} = 0.44, F(3,126) = 34.84, p < 0.001). The regression is significant, which leads the researcher to accept the relationships in the regression test. Competence accounted for 47% of the variance, autonomy accounted for 32% of the variance, while relatedness only accounted for only 2% of the variance.

Scores of relatedness and burnout differed significantly from athletes and non-athletes. Athletes (N = 49) showed higher levels of burnout (M = 3.19, SD = 0.52) than non-athletes (N = 81) (M = 3.08, SD = 0.72). Moreover, athletes showed much higher levels of relatedness than non-athletes (M = 4.42, SD = 0.61) for athletes and (M = 3.95, SD = 0.74) for non-athletes. These findings strongly support the research of Frank (2008), who studied the social experiences and academic activities of athletes in relation to burnout.

Data on the ethnicities of participants was gathered to assess how representative of a sample was obtained during the research process. Since the vast majority of participants (71%) were white, and since incredibly extensive research has shown no major difference in burnout amongst ethnicities (Dyrbye et al., 2007), the researcher chose not to conduct statistical analyses because results would be inconsequential.

To understand differences the number of years at Lindenwood, seniors were contrasted with freshmen. Results showed freshmen have lower competence scores than seniors (M = 4.35, SD = 0.83 for freshmen as compared to M = 5.02, SD = 0.85 for seniors). Freshmen also scored higher on the burnout questionnaire than seniors (M = 3.21, SD = 0.91 for freshmen and M =

3.08, SD = 0.92 for seniors. Conversely, scores of autonomy and relatedness do not differ between freshmen and seniors.

The only difference between sexes was with the score of relatedness, with females averaging a score of 5.3 (SD = 0.81) and males averaging 4.9 (SD = 0.74).

Finally, there were no differences between students between students who were taking part in Lindenwood's Work & Learn program and those who were not. This finding was contrary to those of Jacobs & Dodd (2004). Possible reasons are outlined in the discussion.

Discussion

The purpose of this study was to examine the relationships among academic burnout in college students and perceived levels of autonomy, competence, and relatedness. Researchers have suggested there are negative relationships between low levels of perceived autonomy and competence and some symptoms of burnout, such as emotional exhaustion and reduced sense of personal accomplishment (e.g. Jacobs & Dodd, 2003; Pisarik, 2009). Although a huge body of research suggests a relationship between social support and burnout (e.g. Deci & Ryan, 2000; Gagn'e, 2003; Jacobs & Dodd, 2003), no significant relationship was found between relatedness and burnout in this study.

As abovementioned, results suggest that there is no significant relationship between relatedness and burnout. However, the researcher found an issue that needs to be addressed on the BNPS that might have affected relatedness scores. The researcher believes questions on the BPNS were too ambiguous. For instance, the word "people" in question 4 ("People tell me I am good at what I do") could refer to professors or students. The questionnaire does not offer a way to discriminate the two. Many studies of burnout have found that social support from supervisors (professors in the current study) contributes to significantly lower levels of burnout,

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while support from friends or coworkers (students' peers in the present study) has little effect on

burnout (Huebner, 1994; Ross, Altmaier, & Russell, 1989). Unfortunately, the survey questions

did not allow the researcher to tell which group of people attributed to feelings of relatedness. A

future study might use a questionnaire to measure different forms of social support (e.g.

measuring social support from students' professors separate from students' peers).

Another topic that needs to be addressed is *subjective workload*, because it might affect

scores on burnout questionnaires. Subjective workload, as can be expected, is not necessarily

related to actual workload. Hence, future researchers should be careful asking questions such as

"How many hours do you spend doing homework per week?" because some people can deal

with a larger amount of homework better than others can. Future questions should focus on

looking for more subjective answers. In short, interpersonal, internal, and external factors should

be considered if future researchers intend to base a study of off the present one.

The researcher came up with other potential topics for future study. When considering

burnout, one should look at other factors that affect self-determined motivation and burnout.

Something that needs to be seriously considered is how professors' interactions with students

influence the performance and development of students. Of great concern is burnout in

professors. Sorcinelli (1999) noted that students can sometimes mirror the attitudes of burnt-out

professors, thus becoming burnt-out themselves. It has been shown that receiving feedback from

professors is very important for a person's development (Hill, 2004), and burnt-out professors

often have little concern for students because of disinterest and lethargy caused by lack of

competence and depersonalization (Gagn'e, 2003).

Building from the work of Frank (2008), it is apparent that more researchers need to look

at the overall effects of burnout in college athletes. The reason this research is important is

because students on varsity or junior varsity teams might suffer academically and athletically due to burnout. Future research might also look at the roles coaches play in the prevalence of burnout. As previously mentioned, Sorcinelli (1999) noted that professors can bring about burnout in students, and it is not a stretch to assume the same might be true for coaches.

Future research could be conducted based on the results of my study that would address health risks among students. Nowack and Pentkowski (1994) found that higher levels of burnout in college students are related to an increased likelihood of substance abuse. In a recent study, Pashchall, Antin, Ringwalt, & Saltz (2011) found that college freshmen were more likely to engage in alcohol abuse than upperclassmen. Results of my study suggest that freshmen are more likely to experience burnout and have lower levels of competence than their older peers. Therefore, research could be conducted to find a relationship between scores of competence and alcohol use among college freshmen.

Future research might be conducted to analyze student workload (other than academic workload). For instance, a study might be conducted that looks at students' participation in the university's Work & Learn program and participation in jobs outside of school. As can be expected, jobs outside of school are often just as stressful if not more stressful than many Work & Learn assignments.

There are several limitations to the present study. For starters, all measures in the study were self-report. Therefore, there will always be the possibility of measurement error. Secondly, it cannot be assumed that the results of this study will be similar in different institutions due to different stressors and social structures. (Results from a similar study at a community college would probably not be the same as one conducted at Harvard.) Although this study did roughly

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represent the racial makeup of Lindenwood University, it could have benefitted from a more diverse sample.

Another limitation would be the time of year in which the study was conducted (September-November). For instance, if a similar study were conducted at the end of a semester, the results would surely be different because students will be under the pressures of finals week. Also, the classic "senioritis" might not set in until weeks before seniors graduate. Also, freshmen might score higher on the burnout survey early in their first semester due to shock of the initial workload, as discussed by Jacobs and Dodd (2003). These factor needs to be taken into serious consideration in future research.

Curiously enough, as much can be learned from this research study by analyzing the results as by analyzing the mistakes and limitations. For instance, future researchers studying the topic of burnout and self-determined motivation would find the present study quite valuable by understanding that other factors besides internal (e.g. disposition) and interpersonal (e.g. social support) are taken into consideration. Future researchers using the above questionnaires would benefit from altering the BPNS's relatedness questions to be more professor or peer-specific. Another way would be to use a scale such as the Multidimensional Scale of Perceived Social Support to get a firmer measure of relatedness and avoid the ambiguousness of the relatedness section of the BPNS.

Above all, merely knowing that burnout is a genuine problem faced by undergraduate students at Lindenwood University may empower professionals in the school system to better understand the matter. This study was conducted in order to offer a groundwork for which further research can be conducted to examine burnout among Lindenwood University students from a student-context viewpoint. As greater understanding of the predictors of academic

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burnout is gained, better prevention plans can be created and implemented by school officials to

properly confront the issue.

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Appendix A

Recruitment Description

In this study, you will be asked to complete three short surveys. One will measure your levels of autonomy, relatedness, and competence. The next is intended to assess your emotional state in relation to school. Finally, you will be given a demographic questionnaire. The entire procedure should take no more than 20 minutes of your time.

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Appendix B

Informed Consent Form

I, _____ (print name), understand that I will be taking part in a research project that requires me to complete two survey and a demographic questionnaire. The first survey will measure my levels of autonomy, relatedness, and competence. The second is intended to assess my emotional state in relation to school. The demographic questionnaire will ask me to provide my demographic information (i.e. age, ethnicity, GPA). I understand that I should be able to complete this process within 20 minutes. I am aware that I am free to skip any questions at any time. I am also aware that my participation in this study is strictly voluntary and that I may choose to withdraw from the study at any time without any penalty or prejudice. I should not suffer any penalty or prejudice because I cannot complete the study. I understand that the information obtained from my responses will be analyzed only as part of my overall data and that all identifying information will be absent from the data in order to ensure anonymity. I am also aware that my responses will be kept confidential and that data obtained from this study will only be available for research and educational purposes. I understand that any questions I may have regarding this study shall be answered by the researcher(s) involved to my satisfaction. Finally, I verify that I am at least 18 years of age and am legally able to give consent.

_____   Date: _____

(Signature of participant)

_____   Date: _____

(Signature of researcher obtaining consent)

Student Researcher's Name and Number:

Ben Maxwell (573)-453-0097 gbm575@lionmail.lindenwood.edu

Superviser/Course Instructor

Dr. Michiko Nohara-LeClair (636)-949-4371 mnohara-leclair@lindenwood.edu

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Appendix C

Basic Psychological Needs Survey

ID number: _____

The following questions concern your feelings in school this semester. Please indicate how true each following statement is for you, given your experiences in school. Remember that your professors will never know how you responded to the questions. Please use the following scale in responding to the items.

Please rate the truthfulness of each statement with a score of 1-7. Please write your answer in the blank following the question.

1	2	3	4	5	6	7
not at all			somewhat			very
true			true			true

1.   When I work in a group, I feel like I can influence how work gets done. _____

2.   I really like working with people at school. _____

3.   I do not feel very competent when I do school work. _____

4.   People tell me I am good at what I do. _____

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5.   I feel pressured while at school. _____

6.   I get along with people in school. _____

7.   I pretty much keep to myself when I am in school. _____

8.   I am free to express my ideas and opinions in the classroom. _____

9.   I consider the people I work with to be my friends. _____

10.   I have been able to learn interesting new skills in school. _____

11.   When I am in class, I have to do what I am told. _____

12.   I feel a sense of accomplishment from working on school tasks. _____

13.   My feelings are taken into consideration in school. _____

14.   In class I do not get much of a chance to show how capable I am. _____

15.   People at school care about me. _____

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16.   There are not many people in school that I am close to. _____

17.   I feel like I can pretty much be myself in class. _____

18.   The people I work with sometimes don't like to work with me. _____

19.   I sometimes don't feel very capable of doing my homework. _____

20.   There is not much opportunity for me to decide for myself how to go about my schoolwork. _____

21.   People in school are friendly toward me. _____

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Appendix D

Please indicate how true each of the following statements is given your experiences at Lindenwood University. *Remember that your professors will never know how you responded to the questions.* Please use the following scale in responding to the items.

Please rate the truthfulness of each statement with a score of 0 (Never) to 7 (Always). Write your response in the in blank to the side of the question.

0	1	2	3	4	5	6	7

Never   **Sometimes**   **Always**

1. I feel emotionally drained by my studies. _____

2. I feel used up at the end of a day at school. _____

3. I feel exhausted when I get up in the morning and have to face another day at school. _____

4. Studying or attending class is a strain for me. _____

5. I have become less interested in my education since my enrollment in school. _____

6. I have become less enthusiastic about my studies. _____

7. I have become more skeptical about the potential usefulness of my studies. _____

8. I doubt the significance of my studies. _____

9. I can effectively solve the problems that arise in my studies. _____

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10. I believe that I make an effective contribution to the classes that I attend. _____

11. In my opinion, I am a good student. _____

12. I feel stimulated when I achieve my study goals. _____

13. During class I feel confident that I am effective in getting things done. _____

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Appendix E

Demographic Questionnaire

ID Number: _____

You may choose to decline to answer any of the following questions.

1) Are you   MALE   FEMALE

2) How old are you? _____ years

3) What is your ethnicity?

   a. White
   b. Black
   c. African-American
   d. Hispanic
   e. Asian/Pacific Islander
   f. Native American
   g. More than one ethnicity
   h. Other _____

4) What year are you at Lindenwood University?

   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior
   e. Other _____

5) Are you involved in activities outside of class listed below? If so, please indicate which one(s).
   a. Lindenwood University varsity or junior varsity sports
   b. Clubs, fraternities, sororities, or honor societies
   c. Job outside of school
   d. Lindenwood University Work & Learn assignment

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Appendix F

Feedback Letter

Thank you for participating in my study. The purpose of my study was to investigate the relationships among the dimensions of academic burnout (i.e. emotional exhaustion, reduced sense of personal accomplishment) and self-determined motivation (i.e. perceived competence, autonomy, relatedness) in college undergraduates.

I hypothesized that scores of perceived competence, autonomy, and relatedness would be negatively correlated with burnout in college students.

Please note that I am not interested in your individual results; rather, I am only interested in the overall findings based on all data I collect. No identifying information about you will be associated with any of the findings, nor will it be possible for me to trace your responses on an individual basis.

If you are interested in obtaining the final results of my study based on overall data, or if you have any questions or concerns regarding any portion of this study, please do not hesitate to let me know now or in the future. My contact information is found at the bottom of this letter.

Thank you again for your valuable contribution to this study.

Sincerely,

Principal Investigator:

Ben Maxwell (573)-453-0097 (gbm575@lionmail.lindenwood.edu)

Supervisor:

Dr. Michiko Nohara-LeClair (636)-949-4371 (mnohara-leclair@lindenwood.edu)